

# DoD Global, Laboratory-Based, Influenza Surveillance Program



USAF School of Aerospace Medicine

2014 - 2015

## Cumulative Results

Locations	62
Collected	603
Tested	529



## Respiratory Highlights 2-15 November 2014 (Surveillance Week 45 & 46)

- During 2-15 November 2014, a total of 141 specimens were collected and received from 40 locations. Results were finalized for 88 specimens from 34 locations. During Week 45, five influenza A(H3N2), three A/not subtyped and four influenza B were identified. During Week 46, two influenza A/not subtyped were identified. See Table 1 below for results of other respiratory viruses identified during Weeks 45 & 46.
- On 6 November 2014, German authorities reported an outbreak of highly pathogenic avian influenza A(H5N8) at a turkey holding. This is the first time that avian influenza A(H5N8) has been detected in Europe, and risk of transmission of this virus to the general public is considered extremely low according to the European Center for Disease Prevention and Control (ECDC, 13 November 2014 report, cited 18 November 2014).

### Influenza A 45

A(H1N1)pdm09	0
A(H3N2)	40
A/not subtyped	5

### Influenza B 12

B/Unknown or pending lineage	11
B & Rhino/Enterovirus	1
B/Victoria	0
B/Yamagata	0

### Other Respiratory Pathogens 142

Adenovirus	9
<i>Bordetella Pertussis</i>	0
<i>Chlamydia pneumoniae</i>	0
Coronavirus	3
Human Metapneumovirus	5
<i>Mycoplasma pneumoniae</i>	5
Parainfluenza	25
RSV	6
Rhino/Enterovirus	78
Non-influenza Co-infections	11

Lab data are current as of 17 November 2014. Results are preliminary and may change as more results are received.

**Table 1.** Results by region and location for specimens collected and finalized during Week 45 & 46

Region*		A(H3N2)	A/not subtyped	B	Adenovirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhino/Enterovirus	Para & Rhino/Enterovirus	No Pathogen	Total
PACOM	Eielson AFB, AK	1	-	-	-	-	-	-	-	-	-	-	1
	JB Elmendorf-Richardson, AK	2	-	-	-	-	-	-	-	-	-	-	3
	JR Marianas - Andersen AFB, Guam	-	-	1	-	-	-	-	-	-	-	-	2
	Kadena AB, Japan	-	-	-	-	-	-	-	-	-	-	-	1
	Osan AB, South Korea	-	-	-	-	-	-	-	-	-	-	-	2
Region 1	USCG Academy, CT	-	-	-	-	-	-	-	-	-	-	-	1
Region 2	USMA - West Point, NY	-	-	-	-	-	-	-	-	1	-	-	4
Region 3	NCRM - Ft Belvoir CH, VA	-	-	-	-	-	-	1	-	-	-	-	1
Region 4	Ft Bragg, NC	-	-	-	-	-	-	-	1	-	-	-	1
	Hurlburt Field, FL	-	1	-	-	-	-	-	-	-	-	-	1
	JB Charleston (AF), SC	1	-	-	-	-	-	-	-	-	-	-	1
	JB Charleston (Navy), SC	-	-	-	1	-	-	-	-	-	-	-	1
	Keesler AFB, MS	-	-	-	-	-	-	-	-	1	-	-	3
	Maxwell AFB, AL	-	1	-	-	-	-	-	-	-	-	-	2
	Moody AFB, GA	-	3	-	-	-	-	-	-	-	-	-	3
	NH Camp Lejeune, NC	-	-	-	-	-	-	-	-	-	-	-	1
	Robins AFB, GA	-	-	-	-	-	-	-	-	-	-	-	1
	Seymour Johnson AFB, NC	-	-	-	-	-	-	1	-	-	-	-	3
	Shaw AFB, SC	-	-	-	-	-	-	-	-	-	-	-	1
	Tyndall AFB, FL	1	-	2	-	-	-	-	-	1	-	-	5
Region 5	Wright-Patterson AFB, OH	-	-	-	-	-	-	-	-	-	-	-	2
Region 6	Cannon AFB, NM	-	-	-	-	-	-	-	-	-	-	-	1
	Little Rock AFB, AR	-	-	-	-	-	-	-	-	-	-	-	3
	Sheppard AFB, TX	-	-	-	1	-	-	-	-	-	-	-	5
	Tinker AFB, OK	-	-	-	-	1	1	-	-	-	-	-	5
Region 7	Offutt AFB, NE	-	-	1	-	-	1	-	-	-	-	-	10
Region 8	FE Warren AFB, WY	-	-	-	-	-	-	2	-	-	-	-	3
	Hill AFB, UT	-	-	-	-	-	-	-	-	1	-	-	1
	Minot AFB, ND	-	-	-	-	1	1	-	-	-	-	-	2
	Peterson AFB, CO	-	-	-	-	-	-	-	1	-	-	-	3
Region 9	Davis-Monthan AFB, AZ	-	-	-	-	-	-	-	-	-	-	-	1
	Luke AFB, AZ	-	-	-	-	-	-	-	-	-	-	-	1
	Travis AFB, CA	-	-	-	-	-	-	1	-	-	-	-	6
Region 10	NH Bremerton, WA	-	-	-	-	1	1	-	2	-	-	-	7
Total		5	5	4	1	1	4	8	2	6	1	51	88

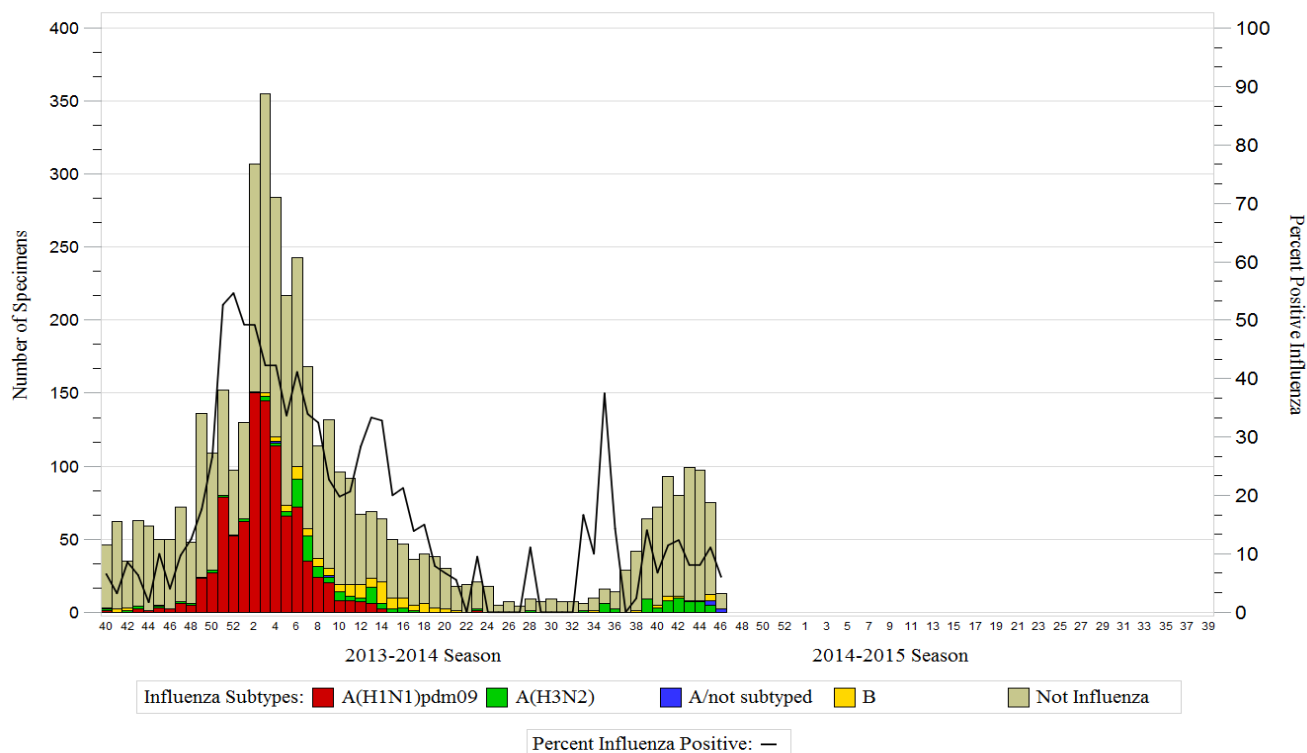
\*US Regions are based on Health & Human Services regions. Other locations are defined by COCOM.

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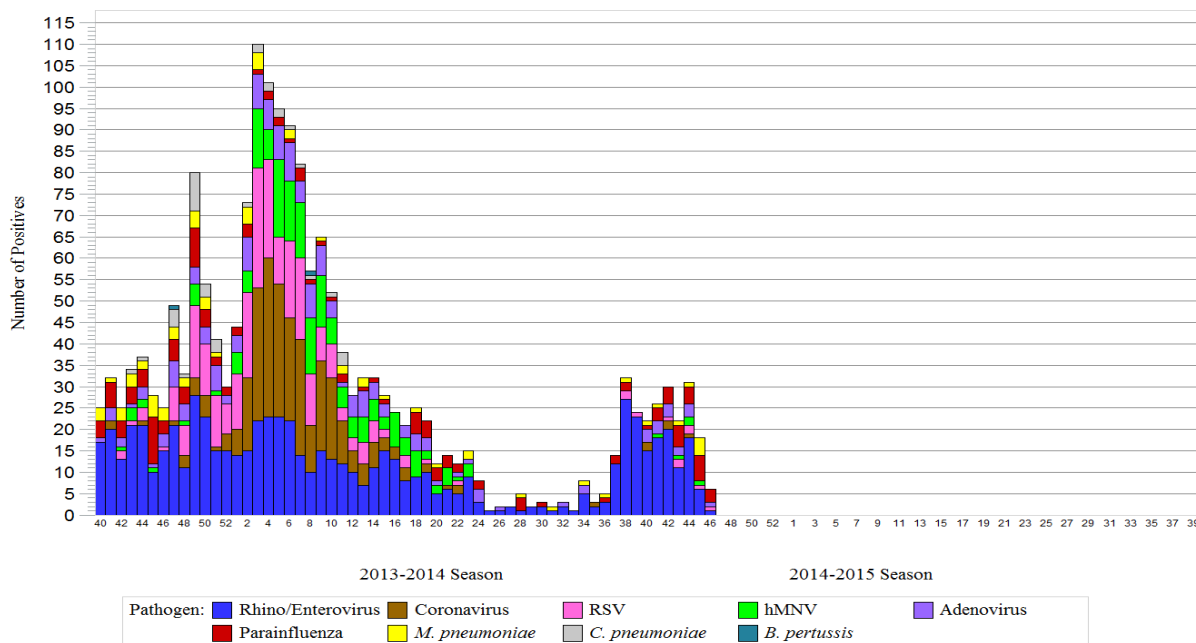
## Laboratory Results - Cumulative for Season

**Graph 1.** Percent influenza positive by week: 2013-2014 surveillance year and through Week 46 of the 2014-2015 surveillance year



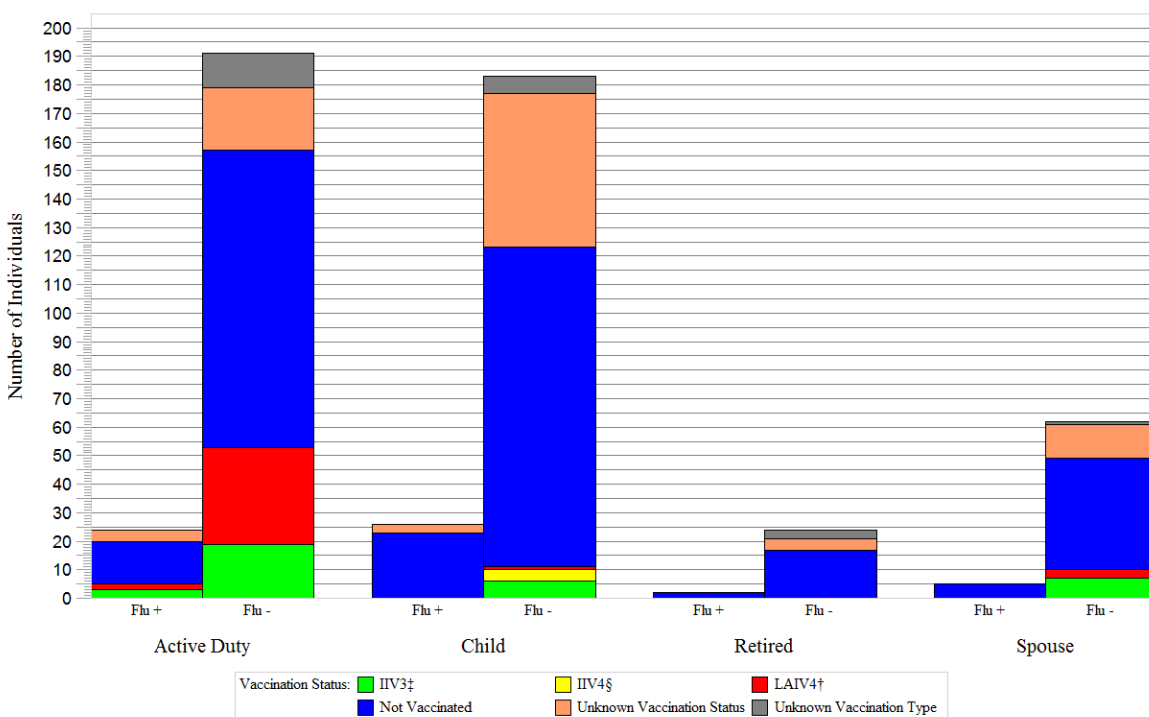
Note: One specimen positive for influenza A(H3N2)v has been excluded from the graph during the 2013-2014 season.

**Graph 2.** Other respiratory pathogen results by week: 2013-2014 surveillance year and through Week 46 of the 2014-2015 surveillance year



Note: Due to change in protocol between the surveillance years 2013-2014 and 2014-2015, a direct comparison between the years cannot be made.

**Graph 3.** Vaccination status by beneficiary type for the 2014-2015 surveillance year through Week 46



‡ Influenza, inactivated vaccine (trivalent)

§ Influenza, inactivated vaccine (quadrivalent)

† Live, attenuated influenza vaccine (quadrivalent)

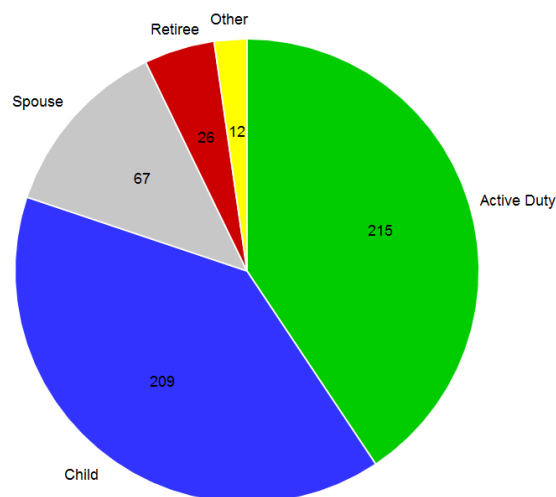
**Table 2.** ILI by age group for the 2014-2015 surveillance year through Week 46

Age Group	Frequency	Percent
0-5	114	21.55
6-9	47	8.88
10-18	51	9.64
19-24	84	15.88
25-44	172	32.51
45-64	48	9.07
65+	13	2.46

## Demographic Summary

Of 529 ILI cases, 215 are service members (40.6%), 209 are children (39.5%), 67 (12.7%) are spouses, and 38 (7.2%) are retirees & other beneficiaries. There are no unknown beneficiary types. The median age of ILI cases with known age (n=529) is 22.0 (range 0, 84) and 212 (40.1%) of these specimens are from ILI cases 18 years of age or younger.

**Graph 4.** ILI by beneficiary status for the 2014-2015 surveillance year through Week 46



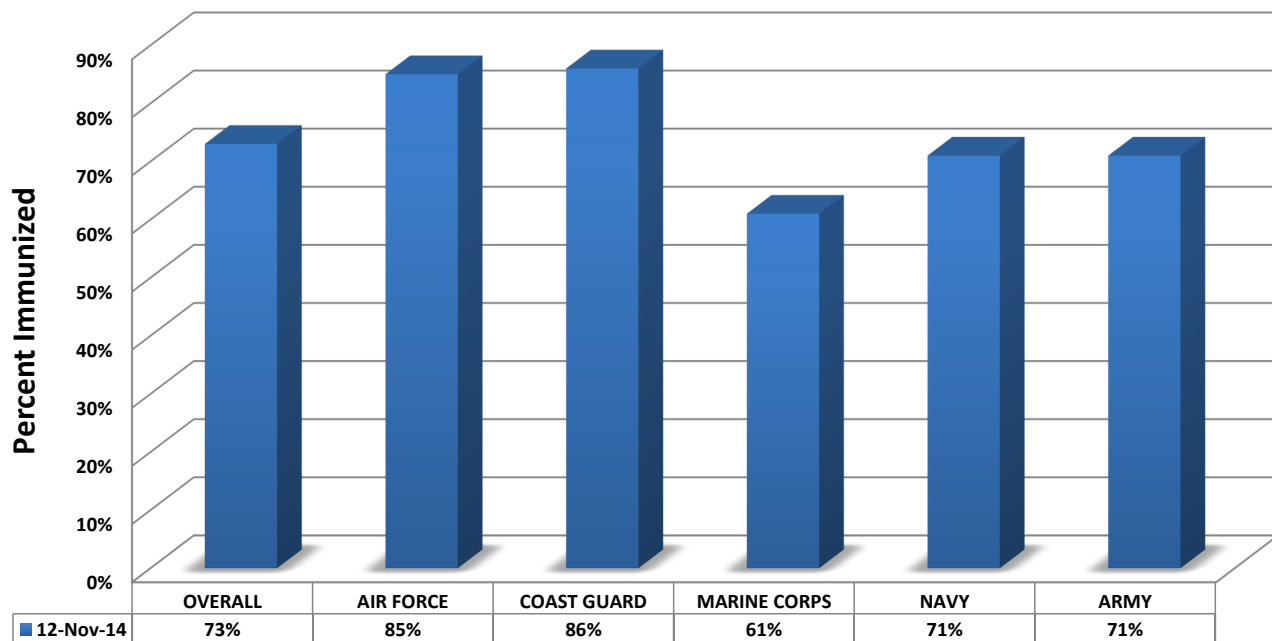
## Laboratory Results—Through Current Surveillance Week 46

**Table 3.** Cumulative results by region and location for specimens collected during the 2014-2015 surveillance year

Region*		A(H3N2)	A/not subtyped	B	B & Rhino/Entero	Adenovirus	Coronavirus	hMPV	M. pneumoniae	Parainfluenza	RSV	Rhinovirus/Enterovirus	Non-Influenza Co-Infection	No Pathogen	Total
Deployed	Country 1, Location B	10	-	-	-	-	1	-	-	-	-	-	-	10	21
	Country 2, Location A	-	-	-	-	-	-	-	-	-	-	-	-	-	7
PACOM	CFA Okinawa, Japan	-	-	-	-	-	-	-	-	-	-	1	-	8	9
	Eielson AFB, AK	1	-	1	-	-	-	-	-	-	-	1	-	3	6
	JB Elmendorf-Richardson, AK	4	-	-	-	-	-	-	-	-	-	-	-	3	7
	JR Marianas - Andersen AFB, Guam	9	-	5	-	-	3	-	1	1	1	1	-	4	24
	Kadena AB, Japan	-	-	-	-	-	-	-	-	-	-	1	-	1	2
	Misawa AB, Japan	-	-	-	-	-	-	-	-	-	-	1	-	2	3
	Osan AB, South Korea	1	-	-	-	-	-	-	-	-	-	-	-	3	4
	Yokota AB, Japan	-	-	-	-	-	-	-	-	-	-	1	-	1	1
Region 1	Hanscom AFB, MA	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	NHCNE Newport, RI	-	-	-	-	-	-	-	-	-	-	1	-	5	6
	USCG Academy, CT	-	-	-	-	-	-	-	1	-	1	-	-	3	5
Region 2	Ft Drum, NY	-	-	1	-	1	-	1	2	-	6	3	17	31	31
	USMA - West Point, NY	-	-	-	-	-	-	-	1	-	5	-	21	27	27
Region 3	JB Andrews, MD	-	-	-	-	-	-	-	-	-	2	-	1	3	3
	JB Langley-Eustis, VA	-	-	-	-	-	-	-	1	-	-	1	5	7	7
	NCRM - Ft Belvoir CH, VA	-	-	-	-	1	-	-	1	-	4	1	4	11	11
Region 4	Columbus AFB, MS	-	-	-	-	-	-	-	-	-	-	-	-	4	4
	Eglin AFB, FL	-	-	-	-	-	-	-	-	-	1	-	7	8	8
	Ft Bragg, NC	-	-	-	-	-	-	-	-	-	1	-	-	1	1
	Ft Campbell, KY	-	-	-	-	-	-	-	-	-	1	1	-	2	4
	Hurlburt Field, FL	-	1	-	-	-	-	-	-	-	-	-	3	4	4
	JB Charleston (AF), SC	1	-	-	-	-	-	-	-	-	-	-	-	1	1
	JB Charleston (Navy), SC	-	-	-	-	-	1	-	-	-	2	-	1	4	4
	Keesler AFB, MS	-	-	-	-	-	-	-	-	-	1	-	4	5	5
	MacDill AFB, FL	-	-	-	-	-	-	-	-	-	-	-	3	3	3
	Maxwell AFB, AL	2	1	-	-	-	-	-	-	-	2	-	9	14	14
	Moody AFB, GA	2	3	-	-	2	1	1	-	1	3	-	5	18	18
	NH Beaufort, SC	-	-	-	-	-	-	-	-	-	-	1	-	1	1
	NH Camp Lejeune, NC	-	-	-	-	-	-	-	-	-	1	-	3	4	4
	NH Jacksonville, FL	1	-	-	-	1	-	-	-	-	4	1	-	7	7
	Robins AFB, GA	-	-	-	-	-	-	-	-	-	-	-	6	6	6
	Seymour Johnson AFB, NC	1	-	-	-	-	-	-	1	-	4	-	3	9	9
	Shaw AFB, SC	-	-	-	-	-	-	-	-	-	1	-	1	2	2
Region 5	Tyndall AFB, FL	4	-	3	-	-	-	-	-	-	-	1	4	12	12
	Scott AFB, IL	1	-	-	-	-	-	-	-	-	1	-	3	5	5
Region 6	Wright-Patterson AFB, OH	-	-	-	-	-	-	-	-	-	3	-	7	10	10
	Altus AFB, OK	-	-	-	1	-	-	-	-	-	2	1	7	11	11
	Cannon AFB, NM	-	-	-	-	-	-	-	-	-	-	-	3	3	3
	Laughlin AFB, TX	-	-	-	-	1	-	-	-	-	-	-	3	4	4
	Little Rock AFB, AR	1	-	-	-	-	-	-	-	-	-	-	9	10	10
	Sheppard AFB, TX	-	-	-	-	1	-	-	-	-	-	-	8	9	9
	Tinker AFB, OK	-	-	-	-	1	-	1	2	-	3	-	23	30	30
Region 7	Offutt AFB, NE	-	-	1	-	-	-	1	3	-	4	-	20	29	29
Region 8	Buckley AFB, CO	-	-	-	-	-	-	-	-	-	1	-	2	3	3
	Ellsworth AFB, SD	-	-	-	-	1	-	-	-	-	1	-	5	7	7
	FE Warren AFB, WY	-	-	-	-	-	-	-	2	-	1	-	8	11	11
	Hill AFB, UT	-	-	-	-	-	-	-	2	-	2	-	3	7	7
	Minot AFB, ND	-	-	-	-	-	-	1	1	-	1	-	3	3	3
	Peterson AFB, CO	-	-	-	-	-	-	-	2	1	3	1	11	18	18
	USAF Academy, CO	-	-	-	-	-	-	-	-	-	1	-	1	2	2
Region 9	Davis-Monthan AFB, AZ	-	-	-	-	-	-	-	-	-	-	-	11	11	11
	Edwards AFB, CA	-	-	-	-	-	-	-	-	-	-	-	2	2	2
	Luke AFB, AZ	-	-	-	-	-	-	-	-	-	-	-	3	3	3
	Nellis AFB, NV	-	-	-	-	1	-	-	-	-	-	-	2	3	3
	Travis AFB, CA	1	-	-	-	-	-	-	3	2	5	-	31	42	42
Region 10	Fairchild AFB, WA	-	-	-	-	-	-	-	-	-	-	-	1	1	1
	Mt Home AFB, ID	1	-	-	-	-	-	-	-	-	-	-	1	2	2
	NH Bremerton, WA	-	-	-	-	-	-	1	1	-	6	-	12	20	20
Total		40	5	11	1	9	3	5	5	25	6	78	11	330	529

\*US Regions are based on Health & Human Services regions. Other locations are defined by COCOM.

**Graph 5.** Influenza immunization status: Percent immunized by service‡



**Table 4.** Influenza immunization status: Percent immunized by service‡

IMMUNIZATION TYPE	# REQUIRED	# COMPLETED VACCINATIONS	% COMPLETED VACCINATIONS	DATA SOURCE
ARMY ACTIVE DUTY	501,071	401,148	80%	
ARMY GUARD	340,710	227,761	67%	
ARMY RESERVE	179,054	98,142	55%	
<b>TOTAL</b>	<b>1,020,835</b>	<b>727,051</b>	<b>71%</b>	<b>MEDPROS</b>
AIR FORCE ACTIVE DUTY	299,775	261,651	87%	exemptions are included in # completed
AIR FORCE GUARD	91,276	74,306	81%	
AIR FORCE RESERVE	34,116	26,474	78%	
<b>TOTAL</b>	<b>425,167</b>	<b>362,431</b>	<b>85%</b>	<b>AFCITA</b>
MARINES ACTIVE DUTY	165,369	98,477	60%	
MARINES RESERVE	26,170	17,719	68%	
<b>TOTAL</b>	<b>191,539</b>	<b>116,196</b>	<b>61%</b>	<b>MRRS</b>
NAVY ACTIVE DUTY	291,116	205,104	70%	
NAVY RESERVE	53,653	39,351	73%	
<b>TOTAL</b>	<b>344,769</b>	<b>244,455</b>	<b>71%</b>	<b>MRRS</b>
COAST GUARD ACTIVE DUTY	40,349	35,276	87%	
COAST GUARD RESERVE	7,469	5,702	76%	
<b>TOTAL</b>	<b>47,818</b>	<b>40,978</b>	<b>86%</b>	<b>MRRS</b>
<b>TOTAL</b>	<b>2,030,128</b>	<b>1,491,111</b>	<b>73%</b>	
<b>RESERVE COMPONENT TOTAL</b>	<b>732,448</b>	<b>489,455</b>	<b>67%</b>	
<b>ACTIVE DUTY TOTAL</b>	<b>1,297,680</b>	<b>1,001,656</b>	<b>77%</b>	

‡Courtesy of DHA Immunizations

# DoD Global Laboratory-Based Influenza Surveillance Program



## USAF School of Aerospace Medicine

2014 - 2015

**Respiratory Surveillance**  
2014-2015 Year  
(beginning 28 September 2014)



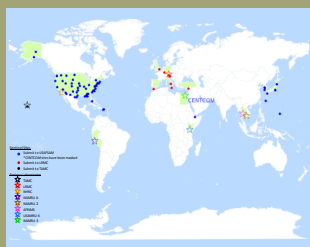
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### Contributions to the CDC for National Influenza Surveillance

All sequence data are sent to the CDC and selected original specimens or isolates are sent for further characterization and possible use as influenza vaccine seed viruses. Specimens may also undergo antiviral testing.

[DoD Global Influenza Surveillance Program](https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza)

[https://](https://gumbo2.area52.afnoapps.usaf.mil/epi-consult/influenza)

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## Background

The DoD-wide program was established by the Global Emerging Infections Surveillance and Response System (GEIS) in 1997. The surveillance network includes the U.S. Air Force School of Aerospace Medicine (USAFSAM) (sentinel site respiratory surveillance), the Naval Health Research Center (recruit and shipboard population-based respiratory surveillance), the Naval Medical Research Unit (NAMRU-3) in Cairo, Egypt, the Naval Medical Research Unit (NAMRU-2) in Phnom Penh, Cambodia, the Armed Forces Research Institute of Medical Sciences (AFRIMS) in Bangkok, Thailand, the Naval Medical Research Unit-6 (NAMRU-6) in Lima, Peru, and the United States Army Medical Research Unit-Kenya (USAMRU-K) located in Nairobi, Kenya. This work is supported by the Air Force and the Division of Global Emerging Infections Surveillance and Response System (GEIS) Operations, a Division of the Armed Forces Health Surveillance Center (AFHSC).

## Sentinel Site Surveillance at USAFSAM

In 1976, the U.S. Air Force Medical Service began conducting routine, global, laboratory-based influenza surveillance. Air Force efforts expanded to DoD-wide in 1997. USAFSAM manages the surveillance program that includes global surveillance among DoD beneficiaries at over 80 sentinel sites (including deployed locations) and many non-sentinel sites (please see map on the left). Unique sentinel sites include three DoD overseas medical research laboratories (AFRIMS, NAMRU-6, USAMRU-K) and the US Army Public Health Command Region South (PHCR-S). These sites collect specimens from local residents in surrounding countries that may not otherwise be covered in existing surveillance efforts.

Since the 2006-2007 season, Landstuhl Regional Medical Center (LRMC) has served EUCOM as a USAFSAM contributing laboratory. The initiative seeks to provide more timely results and efficient transport of specimens.

For an expanded view of this report, visit our website. Also available on the website is a list of previous weekly surveillance reports, program information (including an educational briefing and instruction pamphlets for clinic staff), and an overview of historical data. Please visit the AFHSC/GEIS website for an overview of influenza surveillance at all collaborating organizations.

*Errata:*

## Collaborating Partners

In addition to all participating DoD military sentinel sites, several collaborating partners (described above) may be further understood by reviewing the partner's website.



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